CATALINA T.I. @
CARILLON POINT BUILDING 2000

FIRE ALARM SYSTEM

Project Submittals

CONVERGINT JOB NUMBER: **301-FN-F017**

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SECTION INDEX

SECTION 1 : INITIATING DEVICES

SMOKE DETECTORS	
SIGA2-PS	**INTELLIGENT PHOTOELECTRIC DETECTOR**

EST
Life Safety & Communications

Intelligent Smoke Detector with Optional CO Sensor

SIGA2-PS, SIGA2-PCOS

FM APPROVED 5278-1657: 0300 UL ULC S853

Overview

Signature Series SIGA2-P(CO)S photoelectric detectors bring advanced sensing technology to a practical design that increases efficiency, saves installation time, cuts costs, and extends life safety and property protection capabilities. Continuous self-diagnostics ensure reliability over the long-haul, while innovative field-replacable smoke chambers make detector maintenance literally a snap. With its modular CO sensor, this detector pulls double-duty — continually monitoring the environment for signs of smoke, as well as its invisible yet deadly companion, carbon monoxide.

Like all Signature Series detectors, the SIGA2-P(CO)S is an intelligent device that gathers analog information from its smoke and CO sensor (if present), converting this data into digital signals. To make an alarm decision, the detector's on-board microprocessor measures and analyzes sensor readings and compares this information to historical data. Digital filters remove signal patterns that are not typical of fires, thus virtually eliminating unwanted alarms.

The SIGA2-PCOS includes an advanced carbon monoxide sensor and daughterboard. When the electrochemical cell reaches its end of life after approximately six years, the detector signals a trouble condition to the control panel. The sensor/daughterboard module is field-replaceable.

Standard Features

- Optical smoke sensing technology with optional carbon monoxide sensor
- Field-replacable smoke chamber
- Field-replacable carbon monoxide sensor/daughterboard module
- Uses existing wiring
- Automatic device mapping
- Ground fault detection by module
- Up to 250 devices per loop
- Two levels of environmental compensation
- Two levels of dirty detector warning
- Twenty pre-alarm settings
- Five sensitivity settings
- Non-volatile memory
- Electronic addressing
- Environmental compensation
- Identification of dirty or defective detectors
- Automatic day/night sensitivity adjustment
- Bicolor (green/red) status LED
- Standard, relay, fault isolator, and audible mounting bases

Application

Smoke detection

The SIGA2-PS detects extremely small particles of combustion and triggers an alarm at the first sign of smoke. Thanks to its high-performance forward scattering reflective response technology, the photoelectric smoke sensor responds quickly and reliably to a wide range of fire types, especially slow burning fires fuelled by combustibles typically found in modern multi-use buildings.

Carbon monoxide detection

CO detection has rapidly become a standard part of life safety strategies everywhere. Monitored CO detection is becoming mandated with increasing frequency in all types of commercial applications, but particularly in occupancies such as hotels, rooming houses, dormitories, day care facilities, schools, hospitals, assisted living facilities, and nursing homes. In fact, more than half of the U.S. population already lives in states requiring the installation of CO detectors in some commercial occupancies. This is because carbon monoxide is the leading cause of accidental poisoning deaths in America. Known as the “Silent Killer,” CO is odorless, tasteless, and colorless. It claims nearly 500 lives, and results in more than 15,000 hospital visits annually.

Installation

Signature Series detectors mount to North American 1-gang boxes, 3-1/2 inch or 4 inch octagon boxes, and to 4 inch square electrical boxes 1-1/2 inches (38 mm) deep. They mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. See mounting base installation and wiring for more information.

Testing & Maintenance

Each detector automatically identifies when it is dirty or defective and causes a “dirty detector” message. The detector’s sensitivity measurement can also be transmitted to the loop controller. A sensitivity report can be printed to satisfy NFPA sensitivity measurements which must be conducted at the end of the first year and every two years thereafter.

The user-friendly maintenance program shows the current state of each detector and other pertinent messages. Single detectors may be turned off temporarily from the control panel. Availability of maintenance features is dependent on the fire alarm system used. When the CO sensor’s electrochemical cell reaches its end of life, the detector signals a trouble condition to the control panel. The sensor/daughterboard module is field-replaceable. Scheduled maintenance (Regular or Selected) for proper detector operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72, NFPA 720, and ULC CAN/ULC 536 standards.

This detector will NOT sense fires that start in areas where smoke cannot reach the detector. Smoke from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector to alarm it.

Sensing and reporting technology

The microprocessor in each detector provides four additional benefits - Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.

Self-diagnostics and History Log - Each Signature Series detector constantly runs self-checks to provide important maintenance information. The results of the self-check are automatically updated and permanently stored in the detector’s non-volatile memory

Automatic Device Mapping - The loop controller learns where each device’s serial number address is installed relative to other devices on the circuit. The mapping feature provides supervision of each device’s installed location to prevent a detector from being reinstalled (after cleaning etc.) in a different location from where it was originally.

Stand-alone Operation - A decentralized alarm decision by the detector is guaranteed. On-board intelligence permits the detector to operate in stand-alone mode. If loop controller CPU communications fail for more than four seconds, all devices on that circuit go into stand-alone mode. The circuit acts like a conventional alarm receiving circuit.

Fast Stable Communication - On-board intelligence means less information needs to be sent between the detector and the loop controller. Other than regular supervisory polling response, the detector only needs to communicate with the loop controller when it has something new to report.

Accessories

Detector mounting bases have wiring terminals that are accessible from the “room-side” after mounting the base to the electrical box. The bases mount to North American 1-gang boxes and to 3½ inch or 4 inch octagon boxes, 1½ inches (38 mm) deep. They also mount to European BESA and 1-gang boxes with 60.3 mm fixing centers. The SIGA-SB4, SIGA-RB4, and SIGA-IB4 mount to North American 4 inch sq. electrical boxes in addition to the above boxes. They include the SIGA-TS4 Trim Skirt which is used to cover the “mounting ears” on the base. The SIGA-AB4G mounts to a 4” square box only.

SIGA-AB4G/T
Audible Base

SIGA-SB
Standard Base

SIGA-IB
Isolator Base

SIGA-RB
Relay Base

SIGA-LED
Remote LED

Remote LED SIGA-LED - The remote LED connects to the SIGA-SB or SIGA-SB4 Standard Base only. It features a North American size 1-gang plastic faceplate with a white finish and red alarm LED.

SIGA-TS4 Trim Skirt - Supplied with 4 inch bases, it can also be ordered separately to use with the other bases to help hide surface imperfections not covered by the smaller bases.

SIGA-AB4G and SIGA-AB4GT - These sounder bases are designed for use where localized or group alarm signaling is required. The SIGA-AB4G is compatible with Signature Series smoke and heat detectors. The SIGA-AB4GT sounder base, when used with the SIGA-TCDR Temporal Pattern Generator module, adds an audible output function to any Signature Series detector, including fire and CO detectors.

Typical Wiring

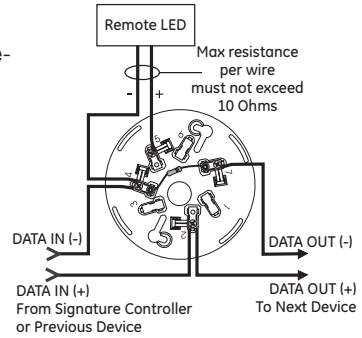
The detector mounting bases accept #18 AWG (0.75mm^2), #16 (1.0mm^2), #14 AWG (1.5mm^2), and #12 AWG (2.5mm^2) wire sizes.

Note: Sizes #16 AWG (1.0mm^2) and #18 AWG (0.75mm^2) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

Standard Detector Base, SIGA-SB, SIGA-SB4

This is the basic mounting base for Edwards Signature Series detectors. The SIGA-LED Remote LED is supported by the Standard Base.

Term	Description
1	Not Used
2	DATA IN/OUT (+)
3	Not Used
4	DATA IN (-)
5	Remote LED (-)
6	Remote LED (+)
7	Not Used
8	DATA OUT (-)



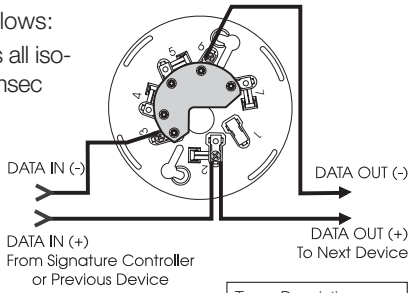
Isolator Detector Base, SIGA-IB, SIGA-IB4

This base includes a built-in line fault isolator for use on Class A circuits. A detector must be installed for it to operate. The isolator base does not support the SIGA-LED Remote LED.

The isolator operates as follows:

- a short on the line causes all isolators to open within 23 msec
- at 10 msec intervals, beginning on one side of the Class A circuit nearest the loop controller, the isolators close to provide the next isolator down the line with power
- when the isolator next to the short closes, reopens within 10 msec.

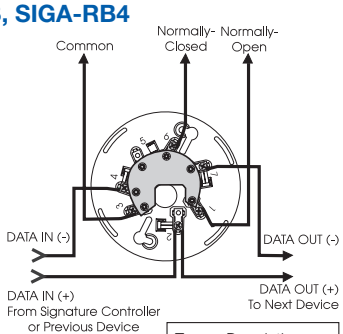
The process repeats beginning on the other side of the loop controller.



Term	Description
1	Not Used
2	DATA IN/OUT (+)
3	DATA IN (-)
4	Not Used
5	Not Used
6	DATA OUT (-)
7	Not Used

Relay Detector Base, SIGA-RB, SIGA-RB4

This base includes a relay. Normally open or closed operation is selected during installation. The dry contact is rated for 1 amp (pilot duty) @ 30 Vdc. The relay's position is supervised to avoid accidentally jarring it out of position. The SIGA-RB can be operated as a control relay if programmed to do so at the control panel (EST3 V.2 only). The relay base does not support the SIGA-LED Remote LED.

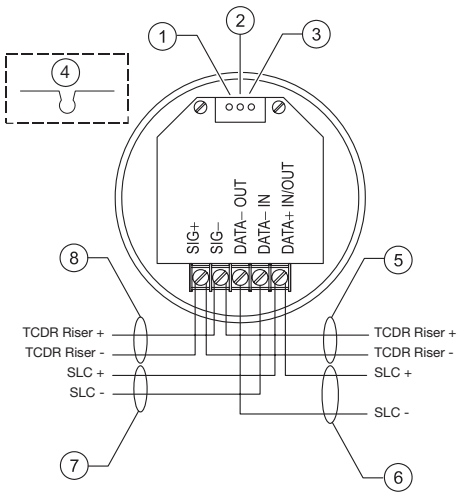


CONTACT RATING
1.0 Amp @ 30 VDC
(Pilot Duty)

Term	Description
1	Normally Open
2	DATA IN/OUT (+)
3	Common
4	DATA IN (-)
5	Not Used
6	Normally-Closed
7	DATA OUT (-)

Audible Detector Base for CO and Fire Detectors, SIGA-AB4GT

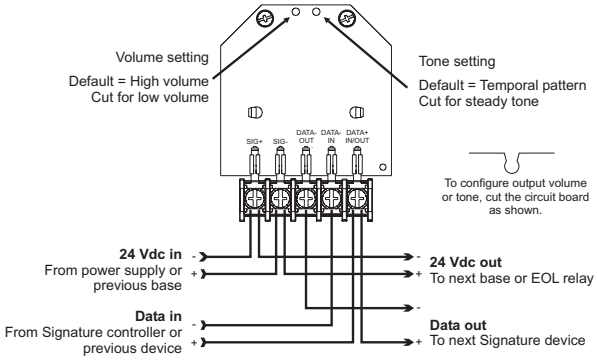
The Signature Series AB4GT sounder base, when used with the SIGA-TCDR Temporal Pattern Generator, adds an audible output function to any Signature Series detector. For more information on this device, refer to *Data Sheet 85001-0623 -- Sounder Base for CO and Fire Detectors*.



1. Volume setting. Default is high volume. For low volume, cut trace per item 4.
2. Reserved for future use. Do not cut.
3. Reserved for future use. Do not cut.
4. To configure output volume, cut trace as shown.
5. To next SIGA-AB4GT sounder base or EOL relay.
6. SLC_OUT to next intelligent addressable device.
7. SLC_IN from intelligent addressable controller or previous device.
8. From SIGA-TCDR Temporal Pattern Generator or previous SIGA-AB4GT sounder base.

Audible Detector Base, SIGA-AB4G

This base is designed for use where localized or group alarm signaling is required. When the detector senses an alarm condition, the audible base emits a local alarm signal. The optional SIGA-CRR Polarity Reversal Relay can be used for sounding to other audible bases on the same 24 Vdc circuit.



Relay and Audible Bases operate as follows:

- at system power-up or reset, the relay is de-energized
- when a detector is installed in the base with the power on, the relay energizes for four seconds, then de-energizes
- when a detector is removed from a base with the power on, the relay is de-energized
- when the detector enters the alarm state, the relay is energized.

Contact us...
Email: edwards.fire@fs.utc.com
Web: www.est-fire.com

EST is an EDWARDS brand.

1016 Corporate Park Drive
Mebane, NC 27302

In Canada, contact Chubb Edwards...
Email: inquiries@chubbedwards.com
Web: www.chubbedwards.com

Compatibility

SIGA2-P(CO)S detectors are compatible only with the Signature Loop Controller.

Warnings & Cautions

This detector will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your fire protection specialist.

This detector will NOT sense fires that start in areas where smoke cannot reach the detector. Smoke from fires in walls, roofs, or on the opposite side of closed doors may not reach the detector to alarm it.

Specifications

	SIGA2-PS	SIGA2-PCOS
Normal operating current	45 µA	70 µA
Alarm current	45 µA	70 µA
Standalone alarm current	18 mA	18 mA
Operating voltage	15.20 to 19.95 VDC	
Air velocity	0 to 4,000 ft./min (0 to 20 m/s).	
Construction	High impact engineering polymer	
Wall mounting	Maximum 12 in (305 mm) from ceiling	
Mounting	Plug-in	
Shipping weight	0.44 lb. (164 g)	
Compatible bases	See Ordering Information	
Operating environment	32 to 120°F (0 to 49°C), 0 to 93% RH, noncondensing	
Storage temperature	–4 to 140°F (–20 to 60°C)	
Environmental compensation	Automatic	

Ordering Information

Catalog Number	Description	Ship Wt. lbs (kg)
SIGA2-PS	Intelligent Photoelectric Detector	0.4 (0.16)
SIGA2-PCOS	Intelligent Photoelectric Detector with carbon monoxide sensor	0.4 (0.16)
SIGA2-PCOS-CA	Intelligent Photoelectric Detector with carbon monoxide sensor (for use in Canadian markets only).	0.4 (0.16)

Accessories		
SIGA-SB	Detector Mounting Base - Standard	
SIGA-SB4	4-inch Detector Mounting Base c/w Trim Skirt	
SIGA-RB	Detector Mounting Base w/Relay	
SIGA-RB4	4-inch Detector Mounting Base w/Relay, c/w Trim Skirt	0.2 (.09)
SIGA-IB	Detector Mounting Base w/Fault Isolator	
SIGA-IB4	4-inch Detector Mounting Base w/ Fault Isolator, c/w Trim Skirt	
SIGA-LED	Remote Alarm LED (not for EN54 applications)	
SIGA-AB4G	Audible (Sounder) Base for Fire Detectors	0.3 (0.15)
SIGA-AB4GT	Audible (Sounder) Base for CO and Fire Detectors	0.3 (0.15)
SIGA-TCDR	Temporal Pattern Generator	0.3 (0.15)
SIGA-TS4	Trim Skirt (supplied with 4-inch bases)	0.1 (.04)
2-SPRC1	Replacement Smoke Chamber (for SIGA2-PS detectors)	0.1 (.04)
2-SPRC2	Replacement Smoke Chamber (for SIGA2-PCOS detectors)	0.1 (.04)
2-CORPL	Replacement CO Sensor	0.1 (.04)

SECTION 2 : NOTIFICATION DEVICES

GENESIS STROBE - CEILING MOUNTED	
GC-VM	**STROBE, 15/30/75/95**
GENESIS HORN-STROBE - CEILING MOUNTED	
GC-HDVM	**HORN-STROBE, 15/30/75/95**

EST
Life Safety & Communications

Field Configurable Ceiling Strobes

Genesis Series

One or more patents pending.

FM APPROVED FC MEA CE 7125-1657: 0219 UL ULC S5389

Overview

Genesis life safety and mass notification/emergency communications (ECS/MNS) ceiling strobes are small, compact, and attractive visible emergency signaling devices. Protruding no more than 1.6" (41 mm) from the ceiling, Genesis strobes blend with any decor.

Thanks to patented breakthrough technology, Edwards Genesis strobes do not require bulky specular reflectors and lenses. Instead, an exclusive cavity design conditions light to produce a highly controlled distribution pattern. Significant development efforts employing this new technology have given rise to a new benchmark in strobe performance – FullLight technology.

FullLight strobe technology produces a smooth light distribution pattern without the spikes and voids characteristic of specular reflectors. This ensures the entire coverage area receives consistent illumination from the strobe flash. As a result, Genesis strobes with FullLight technology go well beyond the minimum UL-required "cross" pattern, significantly exceeding UL-1971 and ULC-S526 light distribution requirements.

Depending on the model, clear lens Genesis ceiling strobes feature 15 to 95, or 95 to 177 candela output (see ordering information), which is selectable with a conveniently-located switch. The candela output setting remains clearly visible even after final installation, yet it is locked in place to prevent unauthorized movement after installation.

Genesis ECS/MNS appliances offer emergency signaling with clear or amber lenses and with optional ALERT housing labels. They are ideal for applications that require differentiation between life safety and mass notification alerts.

Standard Features

- **Field configurable – no need to remove the device!**
  - 15/30/75/95 cd and 95/115/150/177 cd clear strobe lens models available
  - Switch settings remain visible even after the unit is installed
- **ECS/MNS models available**
  - 13/26/65/82 and 82/100/130/155 (1971 equivalent) amber lens models available
- **Unique low-profile design**
  - 30 per cent slimmer profile than comparable signals
  - Attractive appearance
  - No visible mounting screws
  - Available with white or red housings
- **Easy to install**
  - Fits all standard 4" square electrical boxes with plenty of room behind the signal for extra wire – no extension ring or trim plate needed
  - #18 to #12 AWG terminals – ideal for long runs or existing wiring
- **Unparalleled performance**
  - Exclusive FullLight strobe technology produces the industry's most even light distribution
  - Precision timing electronics meet tough synchronizing standards for strobes
  - Low current draw minimizes system overhead
- **Approved for public and private mode applications**
  - UL 1971-listed as signaling devices for the hearing impaired
  - UL 1638-listed as protective visual signaling appliances
  - UL/ULC listed for ceiling or wall use

Application

Genesis strobes are UL 1971 or 1638 listed for indoor use. Prevailing codes require strobes to be used where ambient noise conditions exceed specified levels, where occupants use hearing protection, and in areas of public accommodation. Consult with your Authority Having Jurisdiction for details.

All Genesis strobes exceed UL synchronization requirements (within 10 milliseconds over a two-hour period) when used with a synchronization source. Synchronization for multiple strobe lights in a single field of view is required.

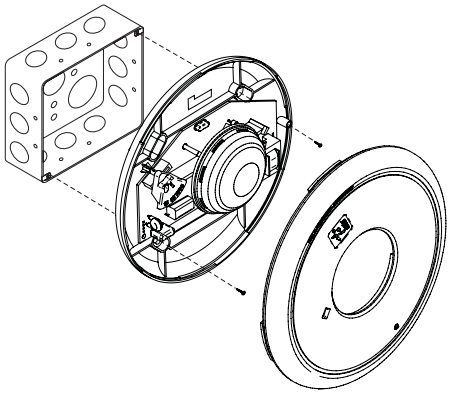
ECS/MNS Applications

Genesis ECS/MNS appliances bring the same high-performance life safety features and unobtrusive design to mass notification applications. Available as standard units with clear or amber lenses with optional ALERT markings, thy are ideal for applications that require differentiation between life safety and ECS/MNS signals. Units are also available (special order) with red, blue or green lenses.

Installation

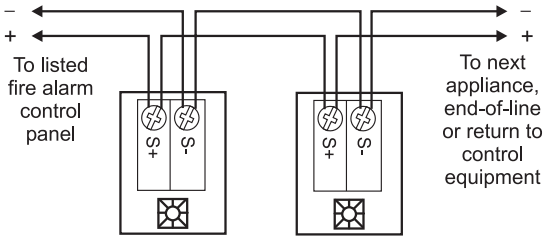
All models are intended for indoor applications only. Strobes mount to any flush North-American 4" square electrical box, $2^1/_8$" (54 mm) deep.

Genesis ceiling strobes simply unlatch and twist to open. This gains access to mounting screws and the selectable candela switch. The shallow depth of Genesis devices leaves ample room behind the signal for extra wiring. Once installed with the cover in place, no mounting screws are visible.

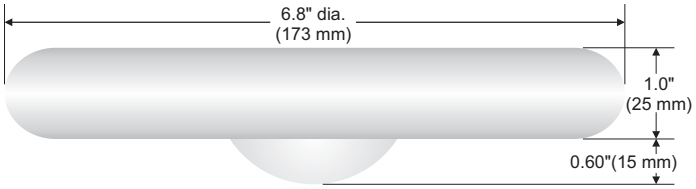


Wiring

Field wiring terminals accommodate #18 to #12 AWG (0.75 mm² to 2.5 mm²) wiring. Strobes are interconnected with a single pair of wires as shown below.

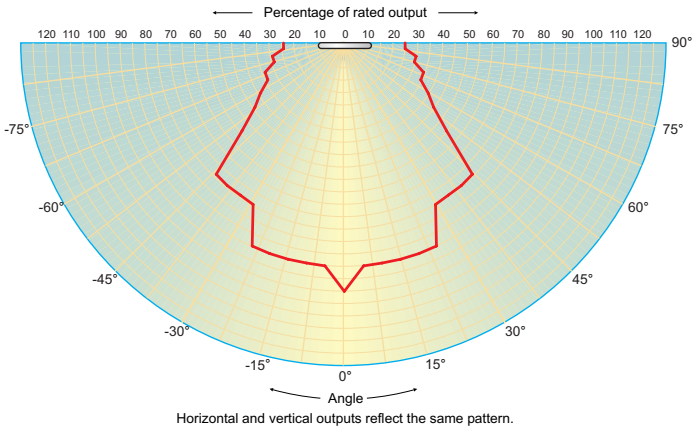


Dimensions



Light output (effective cd)

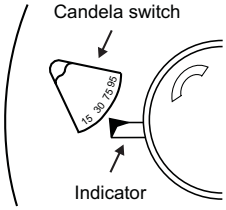
Percent of UL rating versus angle



Horizontal and vertical outputs reflect the same pattern.

Field Configuration

Depending on the model, Genesis ceiling speaker-strobes have multi-candela output (see ordering information). The output setting is changed by simply opening the device and sliding the switch to the desired setting. The strobe does not have to be removed to change the output setting. The setting remains visible through a small window on the front of the device after the cover is closed.



WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist.

Current Draw

Light output switch settings for UL 1971 listed models are selectable by numeric candela value.
ECS/MNS appliances are selectable by A, B, C, or D designations.

UL Rating	Light output setting, standard models				Light output setting, high output models			
	"15" or "D"	"30" or "C"	"75" or "B"	"95" or "A"	"95" or "D"	"115" or "C"	"150" or "B"	"177" or "A"
	RMS	RMS	RMS	RMS	RMS	RMS	RMS	RMS
16 Vdc	109	151	281	318	330	392	502	565
16 Vfwr	131	194	379	437	432	518	643	693

Typical Current	Light output setting, standard models				Light output setting, high output models			
	"15" or "D"	"30" or "C"	"75" or "B"	"95" or "A"	"95" or "D"	"115" or "C"	"150" or "B"	"177" or "A"
	RMS	RMS	RMS	RMS	RMS	RMS	RMS	RMS
16 Vdc	94	140	273	325	333	392	499	551
20 Vdc	74	108	205	244	259	303	378	429
24 Vdc	63	90	168	194	212	245	306	342
33 Vdc	48	70	124	139	155	180	211	236
16 Vfwr	126	187	368	403	484	570	673	724
20 Vfwr	108	156	281	333	380	438	537	604
24 Vfwr	97	139	240	270	318	361	434	484
33 Vfwr	89	119	197	214	245	269	308	338

Current values are shown in mA.

Specifications

Housing	Textured UV stabilized, color impregnated engineered plastic. Exceeds 94V-0 UL flammability rating. Red and white models available.
Lens	Optical grade polycarbonate (clear).
Mounting	Flush mount to North American 4-inch square electrical box, 2-1/8 (54 mm) inches deep. No extension ring required. Suitable for indoor wall or ceiling applications.
Wire Connections	Screw terminals: #18 to #12 AWG (0.75 mm^2 to 2.5 mm^2) wire size.
Operating Voltage	Regulated 16 to 33 Vdc, 16 to 33 Vfwr.
Operating environment	Indoor: 32-120° F (0-49° C) ambient temperature; 0-93% relative humidity.
Agency listings/approvals	Meets or exceeds year 2004 UL requirements for standards UL1638 and UL1971 and Canadian requirements for standards CAN/ULC S526-02 and CAN/ULC S524-01. All models comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule. CSFM, MEA, FM.
Strobe output rating	UL 1971, UL 1638, ULC S526: selectable 15/30/75/95 cd (GC-VM) and 95/115/150/177 cd (GC-VMH)
Strobe operating voltage	GC-VM series strobes: non-coded, filtered 16-33 Vdc or unfiltered 16-33 Vdc FWR.
Strobe flash rate	GC-VM series strobes: one flash per second synchronized with optional G1M Genesis Signal Master indefinitely within 10 milliseconds. Temporal setting (private mode only): synchronized to temporal output of Genesis audible signals on same circuit.
Synchronization	Meets or exceeds UL 1971 requirements. Maximum allowed resistance between any two devices is 20 Ohms. Refer to specifications for the synchronization control module, this strobe, and the control panel to determine allowed wire resistance.
Synchronization Sources	SIGA-CC1S, SIGA-MCC1S, SIGA-CC2A, SIGA-MCC2A, G1M-RM BPS6A, BPS10A, APS6A, APS10A, iO64, iO500, Fireshield Plus 3, 5 and 10 zone. Add G1M for G1-CVM &G1-HDVM devices only.

Contact us...
Email: edwards.fire@fs.utc.com
Web: *www.est-fire.com*

EST is an **EDWARDS** brand.

1016 Corporate Park Drive
Mebane, NC 27302

In Canada, contact Chubb Edwards...
Email: inquiries@chubbedwards.com
Web: *www.chubbedwards.com*

Ordering Information

Light output switch settings for UL 1971 listed models are selectable by numeric candela value.
ECS/MNS appliances are selectable by A, B, C, or D designations.

Model	Housing	Marking	Lens	Strobe	Ship Wt.
Life safety Appliances (c/w running man icon screen printed on housing)					
GC-VM	White	None	Clear	Selectable 15, 30, 75, or 95 cd	1.8 lb. (0.82 kg.)
GCF-VM	White	"FIRE"			
GCFR-VM	Red	"FIRE"			
GC-VMH	White	None		Selectable high output 95, 115, 150, or 177 cd	
GCF-VMH	White	"FIRE"			
ECS/MNS Appliances (no running man icon on housing)					
GCWA-VMA	White	"Alert"	Amber	Selectable A, B, C, D	1.8 lb. (0.82 kg.)
GCWA-VMC			Clear		
GCWN-VMA		None	Amber		
GCWN-VMC			Clear		
GCWA-VMHA		"Alert"	Amber	Selectable high output A, B, C or D	
GCWA-VMHC			Clear		
GCWN-VMHA		None	Amber		
GCWN-VMHC			Clear		

Units with red, blue or green lenses are available as a special order. Contact customer service for details.

Field Configurable Ceiling Horn -Strobes

Genesis Series

One or more patents pending.

7300-1657: 0202

S218

Overview

Genesis ceiling horn-strobes are small, compact, and attractive audible-visible emergency signaling devices. Protruding no more than 1.6" (41 mm), Genesis horn-strobes blend with any decor.

Thanks to patented breakthrough technology, Edwards Genesis strobes do not require bulky specular reflectors and lenses. Instead, an exclusive cavity design conditions light to produce a highly controlled distribution pattern. Significant development efforts employing this new technology have given rise to a new benchmark in strobe performance – FullLight technology.

FullLight strobe technology produces a smooth light distribution pattern without the spikes and voids characteristic of specular reflectors. This ensures the entire coverage area receives consistent illumination from the strobe flash. As a result, Genesis strobes with FullLight technology go well beyond the minimum UL-required "cross" pattern.

Depending on the model, Genesis horn-strobes feature 15 to 95, or 95 to 177 candela output (see ordering information), which is selectable with a conveniently-located switch on the front of the device. The candela output setting is clearly visible even after final installation, yet it remains locked in place to prevent unauthorized movement after installation.

Genesis horn-strobes feature textured housings in architecturally neutral white or eye-catching fire alarm red. An ingenious iconographic symbol indicates the purpose of the device. This universal symbol is code-compliant and is easily recognized by all building occupants regardless of what language they speak. Models with "FIRE" markings are also available.

Standard Features

- **Field configurable – no need to remove the device!**
  - 15/30/75/95 cd and 95/115/150/177 cd models available
  - Switch settings remain visible even after the unit is installed
  - Low/high dB settings
- **Unique low-profile design**
  - 30 per cent slimmer profile than comparable signals
  - No visible mounting screws
  - Available with white or red housings
- **Easy to install**
  - Fits all standard 4" square electrical boxes with plenty of room behind the signal for extra wire – no extension ring or trim plate needed
  - Pre-assembled with captive hardware – no loose pieces
  - #18 to #12 AWG terminals – ideal for long runs or existing wiring
- **Unparalleled performance**
  - Exclusive FullLight strobe technology produces the industry's most even light distribution
  - Single high-efficiency microprocessor controls both horn and strobe
  - Low current draw minimizes system overhead
  - Independent horn control provided over a single pair of wires
  - Highly regulated in-rush current allows the maximum number of strobes on a circuit
  - 100 dB peak – multiple frequency tone improves wall penetration

Application

Genesis strobes are UL 1971-listed for use indoors as ceiling- or wall-mounted public-mode notification appliances for the hearing impaired. Prevailing codes require strobes to be used where ambient noise conditions exceed 105 dBA (87dBA in Canada), where occupants use hearing protection, and in areas of public accommodation as defined in the *Americans with Disabilities Act (see application notes – USA)*.

Combination horn-strobe signals must be installed in accordance with guidelines established for strobe devices.

Strobes

Genesis strobes are UL 1971-listed for use indoors as ceiling- or wall-mounted public-mode notification appliances for the hearing impaired. Prevailing codes require strobes to be used where ambient noise conditions exceed specified levels, where occupants use hearing protection, and in areas of public accommodation. Consult with your Authority Having Jurisdiction for details.

All Genesis strobes exceed UL synchronization requirements (within 10 milliseconds other over a two-hour period) when used with a synchronization source. Synchronization is important in order to avoid epileptic sensitivity.

NOTE: The flash intensity of some visible signals may not be adequate to alert or waken occupants in the protected area. Research indicates that the intensity of strobe needed to awaken 90% of sleeping persons is approximately 100 cd. Edwards recommends that strobes in sleeping rooms be rated at at least 110 cd.

WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, further safeguards such as backup power supplies may be required.

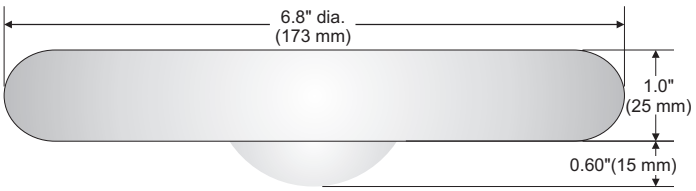
Horns

Genesis horn output reaches as high as 99 dB (peak) and features a unique multiple frequency tone that results in excellent wall penetration and an unmistakable warning of danger. All models may be configured for either coded or non-coded signal circuits. They can also be set for low dB output with a jumper cut that reduces horn output by about 5 dB.

The suggested sound pressure level for each signaling zone used with alert or alarm signals is at least 15 dB above the average ambient sound level, or 5 dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater, measured 5 feet (1.5 m) above the floor. The average ambient sound level is, A-weighted sound pressure measured over a 24-hour period.

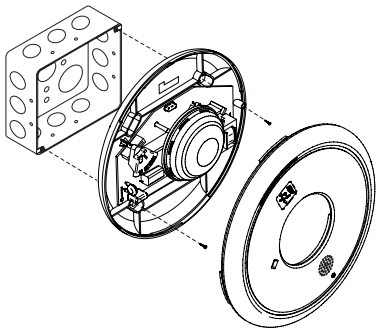
Doubling the distance from the signal to the ear will theoretically result in a 6 dB reduction of the received sound pressure level. The actual effect depends on the acoustic properties of materials in the space. A 3 dBA difference represents a barely noticeable change in volume.

Dimensions



Installation and Mounting

All models are intended for indoor wall or ceiling applications only. Horn-strobes mount to any flush North-American 4" square electrical box.



Genesis ceiling horn-strobes simply unlatch and twist to open. This gains access to mounting screws and the selectable candela switch. The shallow depth of Genesis devices leaves ample room behind the signal for extra wiring. Once installed with the cover in place, no mounting screws are visible.

Edwards recommends that these fire alarm horn-strobes always be installed in accordance with the latest recognized edition of national and local fire alarm codes.

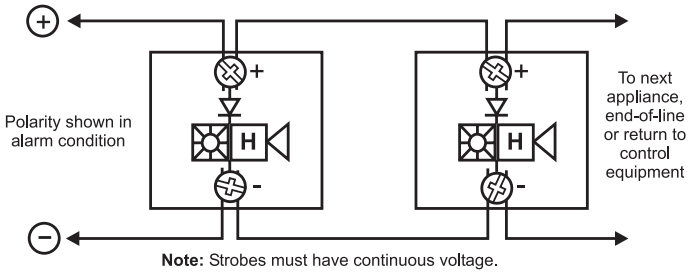
Field Configuration

Depending on the model, Genesis horn-strobes may be set for 15 to 95, or 95 to 177 candela output (see ordering information). The output setting is changed by simply opening the device and sliding the switch to the desired setting. The horn-strobe does not have to be removed to change the output setting. The setting remains visible through a small window on the front of the device after the cover is closed.

The horn-strobe comes factory set for high dB output. Low dB output may be selected by cutting a jumper on the circuit board. This reduces the output by about 5 dB.

Wiring

Field wiring terminals accommodate #18 to #12 AWG (0.75 mm² to 2.5 mm²) wiring. Horn/strobes are interconnected with a single pair of wires as shown below.



Note: Strobes must have continuous voltage.

Current Draw

GC-HDVM Temporal Horn-strobe: High dB Setting

UL Rating	15 cd RMS	30 cd RMS	75 cd RMS	95 cd RMS
16 Vdc	147	190	316	372
16 Vfwr	189	253	417	451

GC-HDVM Temporal Horn-strobe: High dB Setting

Typical Current	15 cd		30 cd		75 cd		95 cd	
	RMS	Mean	RMS	Mean	RMS	Mean	RMS	Mean
16 Vdc	111	95	152	143	281	276	333	328
20 Vdc	91	80	124	117	219	214	257	251
24 Vdc	80	71	108	101	185	180	212	207
33 Vdc	69	62	89	84	144	140	160	156
16 Vfwr	153	81	218	123	388	240	420	268
20 Vfwr	141	70	190	100	325	188	378	219
24 Vfwr	135	64	176	90	280	154	310	180
33 Vfwr	139	61	167	80	241	122	254	133

GC-HDVM Temporal Horn-strobe: Low dB Setting

Typical Current	15 cd		30 cd		75 cd		95 cd	
	RMS	Mean	RMS	Mean	RMS	Mean	RMS	Mean
16 Vdc	108	91	149	139	275	269	327	322
20 Vdc	87	75	120	113	214	209	250	245
24 Vdc	76	66	103	97	180	175	205	201
33 Vdc	64	57	85	80	138	135	153	150
16 Vfwr	141	76	204	118	384	239	418	265
20 Vfwr	127	65	176	95	312	181	371	214
24 Vfwr	118	60	162	82	262	149	301	171
33 Vfwr	127	56	155	73	229	118	249	129

GC-HDVMH High cd Temporal Horn-strobe: High dB Setting

95 cd RMS	115 cd RMS	150 cd RMS	177 cd RMS
341	399	506	570
487	578	670	711

GC-HDVMH High cd Temporal Horn-strobe: High dB Setting

95 cd		115 cd		150 cd		177 cd	
RMS	Mean	RMS	Mean	RMS	Mean	RMS	Mean
324	322	377	374	477	474	554	551
258	256	299	296	369	366	417	414
220	217	252	249	304	301	341	338
172	169	188	185	223	220	244	241
463	265	535	312	665	400	718	442
392	211	439	240	517	287	587	334
346	179	382	212	458	246	498	271
296	142	323	152	358	178	387	194

GC-HDVMH High cd Temporal Horn-strobe: Low dB Setting

95 cd		115 cd		150 cd		177 cd	
RMS	Mean	RMS	Mean	RMS	Mean	RMS	Mean
317	315	378	376	480	477	544	542
252	250	292	290	364	362	414	411
212	211	245	243	297	295	334	332
159	157	181	179	215	213	234	232
461	265	521	305	656	396	705	432
381	208	437	242	508	285	576	326
335	172	370	195	440	235	485	264
285	134	308	149	349	169	373	186

Notes and Comments

1. Current values are shown in mA.
2. UL Nameplate Rating can vary from Typical Current due to measurement methods and instruments used.
3. Edwards recommends using the Typical Current for system design including NAC and Power Supply loading and voltage drop calculations.
4. Use the Vdc RMS current ratings for filtered power supply and battery AH calculations. Use the Vfwr RMS current ratings for unfiltered power supply calculations.
5. Fuses, circuit breakers and other overcurrent protection devices are typically rated for current in RMS values. Most of these devices operate based upon the heating affect of the current flowing through the device. The RMS current (not the mean current) determines the heating affect and therefore, the trip and hold threshold for those devices.
6. Our industry has used 'mean' currents over the years. However, UL will direct the industry to use the 2004 RMS values in the future.

dBA output

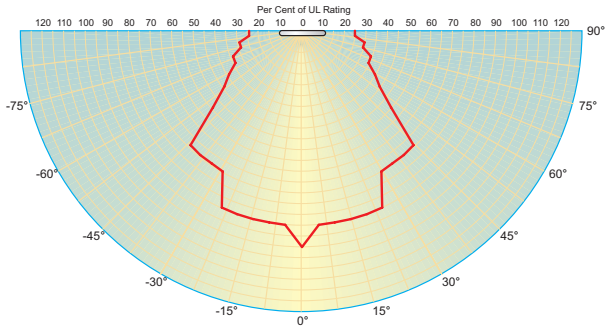
High dB Setting	UL464		Average	Peak
	Temporal	Steady	Temporal/ Steady	Temporal/ Steady
16 Vdc	79.8	83.2	90.6	93.6
24 Vdc	83.3	85.4	93.6	96.6
33 Vdc	85	87.8	95.7	98.7

Low dB Setting	UL464		Average	Peak
	Temporal	Steady	Temporal/ Steady	Temporal/ Steady
16 Vdc	75	79.3	86.3	88.7
24 Vdc	78	83	88.8	92.4
33 Vdc	80.9	85.9	91.8	95.1

Notes
1. All values shown are dBA measured at 10 feet (3.01m); **2.** UL464 values measured in reverberation room; **3.** Average and Peak values are measured in anechoic chamber.

Light output - (effective cd)

Percent of UL rating versus angle



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Web: *www.chubbedwards.com*

Specifications

Housing	Textured UV stabilized, color impregnated engineered plastic. Exceeds 94V-0 UL flammability rating. Red and white models available.
Lens	Optical grade polycarbonate (clear)
Mounting	North-American 4" square box, 2 1/8" (54 mm) deep (indoor wall or ceiling applications only).
Wire connections	Screw terminals: single input for both horn and strobe. #18 to #12 AWG (0.75 mm^2 to 2.5 mm^2) wire size
Operating environment	Indoor: 32-120°F (0-49°C) ambient temperature. 93% relative humidity
Agency listings/approvals	Meets or exceeds ULC-S525 & ULC-S526, year 2004 UL requirements for standards UL1638 and UL1971, and complies with UL1480. All horn-strobes comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule. CSFM, MEA, FM.
Operating voltage	GC-HDVM series temporal-tone horn-strobes: non-coded, filtered 16-33 Vdc or unfiltered 16-33 Vdc FWR (or coded (audible NAC only) when used with optional G1M Genesis Signal Master)
Strobe output rating	UL 1971, UL 1638, ULC S526: selectable 15/30/75/95 cd (GC-HDVM) and 95/115/150/177 cd (GC-HDVMH)
Strobe flash rate	GC-HDVM series temporal-tone horn-strobes: one flash per second synchronized with optional G1M Genesis Signal Master indefinitely within 10 milliseconds (or self-synchronized within 200 milliseconds over thirty minutes on a common circuit without G1M Genesis Signal Master) Temporal setting (private mode only): synchronized to temporal output of horns on same circuit
Synchronization Sources	G1M-RM, SIGA-CC1S, SIGA-MCC1S, BPS6A, BPS10A
Horn pulse rate	GC-HDVM series temporal-tone horn-strobes: temporal rate synchronized with optional G1M Genesis Signal Master indefinitely within 10 milliseconds (or self-synchronized within 200 milliseconds over thirty minutes on a common circuit without G1M Genesis Signal Master)
Temporal audible pattern	½ sec ON, ½ sec OFF, ½ sec ON, ½ sec OFF, ½ sec ON, 1½ sec OFF, then repeat cycle

Ordering Information

Catalog Number	Housing Color	Marking	Description	Ship Wt. lbs (kg)
GC-HDVM	White	None	Genesis Ceiling/Wall Horn-Strobe with selectable 15, 30, 75, or 95 cd output	0.82 (1.8)
GCF-HDVM	White	"FIRE"		
GCFR-HDVM	Red	"FIRE"		
GC-HDVMH	White	None	Genesis Ceiling/Wall Horn-Strobe with selectable 95, 115, 150, or 177 cd output	
GCF-HDVMH	White	"FIRE"		

Accessories		
G1M-RM	Genesis Signal Master – Remote Mount (1-gang)	0.2 (0.1)
SIGA-CC1S	Intelligent Synchronization Output Module (2-gang)	0.5 (0.23)
SIGA-MCC1S	Intelligent Synchronization Output Module (Plug-in UIO)	0.18 (0.08)

White Field Configurable Ceiling Horn-Strobes may be ordered with or without optional 'FIRE' marking. Red Horn-Strobes come with 'FIRE" marking.